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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/348,980	07/07/1999	LIU ZHONGDU	M-6043-US	6056

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EXAMINER	
FLEMING, FRITZ M	
ART UNIT	PAPER NUMBER
2836	#24

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/348,980	ZHONGDU, LIU
	Examiner	Art Unit
	Fritz M. Fleming	2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68 and 115-133* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,8,29,30,44-54,67,68,115-117 and 127-129* is/are rejected.

7)☒ Claim(s) *6,9-28,31-43,55-66,118-126 and 130-133* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-16-02 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5,29,30,67,68 are rejected under 35 U.S.C. 102(b) as being anticipated by Weber.

For instance, note a solid state switch 45 in the form of a TRIAC 45 (which is the same thing as anti-parallel connected SCRs); a first terminal and second terminal MT1,2; the semiconductor switch 45 coupled by the first and second terminals to the load 2 and the AC source L2,4 to form a series circuit; with a control signal applied at the gate of 45 determining the on/off state of the switch 45, wherein the control circuit seen as the circuitry connected to the gate and also including the N.O. switch 3A draws no current when the switch is off, as the N.O. switch 3A is momentarily closed so as to turn on the load 2 and by virtue of such, the transformer 15 is then energized by the drawing of load current and then the gate of the TRIAC is controlled on for the selected duration. Note

that 3A is in parallel with the TRIAC 45, thus anticipating the claimed subject matter, as all that is claimed is a "parallel configuration". The circuitry driving the gate performs the claim 4 dynamic feedback circuit. Figure 3 shows only solid state components as things such as vacuum tubes are not shown. The device is normally off and hence such is the initialization state when 3A is open. Regarding claim 68, see column 10, lines 30+ which discuss the use of fiber optics and LEDs for use in a photocoupled (i.e. an optocoupler) to drive the TRIAC. Regarding claim 127, the light emitting material is the load 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 115-117,128,129 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber.

Weber teaches multi-point remote control at, for instance, Figures 6B+ and also teaches optocoupling at column 10. Thus it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify the multi-point remote control of Figures 6B+ with the optocoupling for the purposes of increased safety in dangerous environments as set forth at column 10. The circuit details are shown in Figure 14, and in such a multi-point system, a signal bus as well as grounding are necessary so as to provide the required fibre-optics of column 10. Regarding claims

128,129, such materials are commonly used for glow in the dark applications so as to assist a user in locating an object. The claim only requires the presence of such, and thus to add such for the intended purpose is obvious subject matter.

6. Claims 7,8,44,45,48-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Ambler et al.

Weber lacks the overcurrent protection and its associated details.

Ambler et al. teach the use of an AC source 11 to supply a load 16 via triacs 114,116. Figure 2 shows a current transformer 47 to judge the overcurrent, as well as 46 and 48. The purpose is to render the triacs non-conducting during an overcurrent. Note the use of a rectifier 55 and threshold circuitry subsequent to that. Regarding the type of diode, such is determined by the end use circuitry. Note the use of numerous resistors subsequent to the diode.

Therefore it would have been obvious to one having ordinary skill in the art at the time that the invention was made to modify Weber per Ambler et al. so as to benefit from overcurrent protection.

7. Claims 46,47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Ambler et al. as applied to claims 7,8,44,45,48-54 above, and further in view of Kim et al.

Weber in view of Ambler et al. lack the temperature compensation.

Kim et al teach the use of R35 for temperature compensation for the transistor Q2 which turns on when the current exceeds a threshold. Thus it is obvious that the threshold is temperature compensated.

Therefore it is obvious to one having ordinary skill in the art at the time that the invention was made to modify Weber in view of Ambler et al. per the teachings of Kim et al. for the purpose of temperature compensating the overcurrent detection.

Claim Objections

8. Claim 9 is objected to because of the following informalities: it seems to use the term "electrical signal" instead of the claim 1 "control signal", which seems to be the signal claim 9 is referring to. Appropriate correction is required.

Allowable Subject Matter

9. Claims 6,9-28,31-43,55-66,118-126,130-133 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
The indicated claims are dependent from claims 6,9,118 in various shapes. The art of record does not describe the claim 6 rectifier and capacitor and their functionality during the off state; the claim 9 touch panel providing the electrical signal; and the claim 118 initialization circuit. The Barkan et al. reference seems to teach what is missing, but a careful reading reveals that the resistors 130 and 132 provide a current path even when the SCR 102 is off (see for instance column 11), therefore rendering any possible combination improper as claim 1 requires no current path in the control circuit in the off state.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Myer and Asija and Penman and Cousy teach control circuits, but

not parallel and not with no current path. The EP and JP publications seem to be equivalent to the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz M. Fleming whose telephone number is 703-308-1483. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 703-308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1782.

Fritz M. Fleming
Primary Patent Examiner
Art Unit 2836

fmf
November 15, 2002